

1/16

## FIG. 1A

AD7c-NTP

Nucleic Acid and Amino Acid Sequence

(Sequences 120 and 121 from U.S. Patent Nos. 5,830,670, 5,948,634, and 5,948,888; de la Monte *et al.*, *J. Clin. Invest.*, 100: 3093-3104 (1997))

NCBI Entrez-Protein Accession # AAC08737; PID g3002527

```
1 tttttttttttgag ATG GAG TTT TCG CTC TTG TTG CCC AGG CTG GAG TGC AAT GGC GCA ATC 62
1 M E F S L L L P R L E C N G A I 16
Met-Glu-Phe-Ser-Leu-Leu-Leu-Pro-Arg-Leu-Glu-Cys-Asn-Gly-Ala-Ile-

63 TCA GCT CAC CGC AAC CTC CGC CTC CCG GGT TCA AGC GAT TCT CCT GCC TCA GCC TCC CCA 122
17 S A H R N L R L P G S S D S P A S A S P 36
Ser-Ala-His-Arg-Asn-Leu-Arg-Leu-Pro-Gly-Ser-Ser-Asp-Ser-Pro-Ala-Ser-Ala-Ser-Pro-

123 GTA GCT GGG ATT ACA GGC ATG TGC ACC CAC GCT CGG CTA ATT TTG TAT TTT TTT TTA GTA 182
37 V A G I T G M C T H A R L I L Y F F L V 56
Val-Ala-Gly-Ile-Thr-Gly-Met-Cys-Thr-His-Ala-Arg-Leu-Ile-Leu-Tyr-Phe-Phe-Leu-Val-

183 GAG ATG GAG TTT CTC CAT GTT GGT CAG GCT GGT CTC GAA CTC CCG ACC TCA GAT GAT CCC 242
57 E M E F L H V G Q A G L E L P T S D D P 76
Glu-Met-Glu-Phe-Leu-His-Val-Gly-Gln-Ala-Gly-Leu-Glu-Leu-Pro-Thr-Ser-Asp-Asp-Pro-

243 TCC GTC TCG GCC TCC CAA AGT GCT AGA TAC AGG ACT GGC CAC CAT GCC CGG CTC TGC CTG 302
77 S V S A S Q S A R Y R T G H H A R L C L 96
Ser-Val-Ser-Ala-Ser-Gln-Ser-Ala-Arg-Tyr-Arg-Thr-Gly-His-His-Ala-Arg-Leu-Cys-Leu-
```

2/16

## FIG. 1B

303 GCT AAT TTT TGT GGT AGA AAC AGG GTT TCA CTG ATG TGC CCA AGC TGG TCT CCT GAG CTC 362  
97 A N F C G R N R V S L M C P S W S P E L 116  
Ala-Asn-Phe-Cys-Gly-Arg-Asn-Arg-Val-Ser-Leu-Met-Cys-Pro-Ser-Trp-Ser-Pro-Glu-Leu-

363 AAG CAG TCC ACC TGC CTC AGC CTC CCA AAG TGC TGG GAT TAC AGG CGT GCA GCC GTG CCT 422  
117 K Q S T C L S L P K C W D Y R R A A V P 136  
Lys-Gln-Ser-Thr-Cys-Leu-Ser-Leu-Pro-Lys-Cys-Trp-Asp-Tyr-Arg-Arg-Ala-Ala-Val-Pro-

423 GGC CTT TTT ATT TTA TTT TTT TTA AGA CAC AGG TGT CCC ACT CTT ACC CAG GAT GAA GTG 482  
137 G L F I L F F L R H R C P T L T Q D E V 156  
Gly-Leu-Phe-Ile-Leu-Phe-Phe-Leu-Arg-His-Arg-Cys-Pro-Thr-Leu-Thr-Gln-Asp-Glu-Val-

483 CAG TGG TGT GAT CAC AGC TCA CTG CAG CCT TCA ACT CCT GAG ATC AAG CAT CCT CCT GCC 542  
157 Q W C D H S S L Q P S T P E I K H P P A 176  
Gln-Trp-Cys-Asp-His-Ser-Ser-Leu-Gln-Pro-Ser-Thr-Pro-Glu-Ile-Lys-His-Pro-Pro-Ala-

543 TCA GCC TCC CAA GTA GCT GGG ACC AAA GAC ATG CAC CAC TAC ACC TGG CTA ATT TTT ATT 602  
177 S A S Q V A G T K D M H H Y T W L I F I 196  
Ser-Ala-Ser-Gln-Val-Ala-Gly-Thr-Lys-Asp-Met-His-His-Tyr-Thr-Trp-Leu-Ile-Phe-Ile-

603 TTT ATT TTT AAT TTT TTG AGA CAG AGT CTC AAC TCT GTC ACC CAG GCT GGA GTG CAG TGG 662  
197 F I F N F L R Q S L N S V T Q A G V Q W 216  
Phe-Ile-Phe-Asn-Phe-Leu-Arg-Gln-Ser-Leu-Asn-Ser-Val-Thr-Gln-Ala-Gly-Val-Gln-Trp-

663 CGC AAT CTT GGC TCA CTG CAA CCT CTG CCT CCC GGG TTC AAG TTA TTC TCC TGC CCC AGC 722  
217 R N L G S L Q P L P P G F K L F S C P S 236  
Arg-Asn-Leu-Gly-Ser-Leu-Gln-Pro-Leu-Pro-Pro-Gly-Phe-Lys-Leu-Phe-Ser-Cys-Pro-Ser-

723 CTC CTG AGT AGC TGG GAC TAC AGG CGC CCA CCA CGC CTA GCT AAT TTT TTT GTA TTT TTA 782  
237 L L S S W D Y R R P P R L A N F F V F L 256  
Leu-Leu-Ser-Ser-Trp-Asp-Tyr-Arg-Arg-Pro-Pro-Arg-Leu-Ala-Asn-Phe-Phe-Val-Phe-Leu-

783 GTA GAG ATG GGG TTC ACC ATG TTC GCC AGG TTG ATC TTG ATC TCT GGA CCT TGT GAT CTG 842  
257 V E M G F T M F A R L I L I S G P C D L 276  
Val-Glu-Met-Gly-Phe-Thr-Met-Phe-Ala-Arg-Leu-Ile-Leu-Ile-Ser-Gly-Pro-Cys-Asp-Leu-

3/16

## FIG. 1C

843 CCT GCC TCG GCC TCC CAA AGT GCT GGG ATT ACA GGC GTG AGC CAC CAC GCC CGG CTT ATT 902  
277 P A S A S Q S A G I T G V S H H A R L I 296  
Pro-Ala-Ser-Ala-Ser-Gln-Ser-Ala-Gly-Ile-Thr-Gly-Val-Ser-His-His-Ala-Arg-Leu-Ile-

903 TTT AAT TTT TGT TTG TTT GAA ATG GAA TCT CAC TCT GTT ACC CAG GCT GGA GTG CAA TGG 962  
297 F N F C L F E M E S H S V T Q A G V Q W 316  
Phe-Asn-Phe-Cys-Leu-Phe-Glu-Met-Glu-Ser-His-Ser-Val-Thr-Gln-Ala-Gly-Val-Gln-Trp-

963 CCA AAT CTC GGC TCA CTG CAA CCT CTG CCT CCC GGG CTC AAG CGA TTC TCC TGT CTC AGC 1022  
317 P N L G S L Q P L P P G L K R F S C L S 336  
Pro-Asn-Leu-Gly-Ser-Leu-Gln-Pro-Leu-Pro-Pro-Gly-Leu-Lys-Arg-Phe-Ser-Cys-Leu-Ser-

1023 CTC CCA AGC AGC TGG GAT TAC GGG CAC CTG CCA CCA CAC CCC GCT AAT TTT TGT ATT TTC 1082  
337 L P S S W D Y G H L P P H P A N F C I F 356  
Leu-Pro-Ser-Ser-Trp-Asp-Tyr-Gly-His-Leu-Pro-Pro-His-Pro-Ala-Asn-Phe-Cys-Ile-Phe-

1083 ATT AGA GGC GGG GTT TCA CCA TAT TTG TCA GGC TGG TCT CAA ACT CCT GAC CTC AGG tgac  
1143  
357 I R G G V S P Y L S G W S Q T P D L R  
375  
Ile-Arg-Gly-Gly-Val-Ser-Pro-Tyr-Leu-Ser-Gly-Trp-Ser-Gln-Thr-Pro-Asp-Leu-Arg

1144 ccacctgcctcagccttccaaagtgtgggattacaggcgtgagccacctcaccagccggctaatttagataaaaaaat  
1223

1224 atgtagcaatgggggtcttgctatgttgcaggctggtctcaaaacttctggcttcatgcaatccttccaaatgagcca  
1303

1304 caacacccagccagtcacattttttaacagttacatctttattttagtatactagaaagtaataacaataaacatgtcaa  
1383

1384 acctgcaaattcagtagtaacagagttcttttataacttttaacaaagctttagagca 1442

4/16

## NTP, 122 amino acids **FIG. 2**

(Sequence 40 from U.S. Patent Nos. 5,830,670, 5,948,634, and 5,948,888)

NCBI Entrez-Protein Accession #AAE25447 PID g10048540

### Amino Acid Sequence

```
1   Met-Met-Val-Cys-Trp-Asn-Arg-Phe-Gly-Lys-
    M   M   V   C   W   N   R   F   G   K

11  Trp-Val-Tyr-Phe-Ile-Ser-Ala-Ile-Phe-Asn-
    W   V   Y   F   I   S   A   I   F   N

21  Phe-Gly-Pro-Arg-Tyr-Leu-Tyr-His-Gly-Val-
    F   G   P   R   Y   L   Y   H   G   V

31  Pro-Phe-Tyr-Phe-Leu-Ile-Leu-Val-Arg-Ile-
    P   F   Y   F   L   I   L   V   R   I

41  Ile-Ser-Phe-Leu-Ile-Gly-Asp-Met-Glu-Asp-
    I   S   F   L   I   G   D   M   E   D

51  Val-Leu-Leu-Asn-Cys-Thr-Leu-Leu-Lys-Arg-
    V   L   L   N   C   T   L   L   K   R

61  Ser-Ser-Arg-Phe-Arg-Phe-Trp-Gly-Ala-Leu-
    S   S   R   F   R   F   W   G   A   L

71  Val-Cys-Ser-Met-Asp-Ser-Cys-Arg-Phe-Ser
    V   C   S   M   D   S   C   R   F   S

81  Arg-Val-Ala-Val-Thr-Tyr-Arg-Phe-Ile-Thr-
    R   V   A   V   T   Y   R   F   I   T

91  Leu-Leu-Asn-Ile-Pro-Ser-Pro-Ala-Val-Trp-
    L   L   N   I   P   S   P   A   V   W

101 Met-Ala-Arg-Asn-Thr-Ile-Asp-Gln-Gln-Val-
    M   A   R   N   T   I   D   Q   Q   V

111 Leu-Ser-Arg-Ile-Lys-Leu-Glu-Ile-Lys-Arg-
    L   S   R   I   K   L   E   I   K   R

121 Cys-Leu
    C   L
```

5/16

## FIG. 3

NTP, 112 amino acids

NCBI Entrez-Protein Accession #XP\_032307 PID g14725132

Amino Acid Sequence

```
1   Met-Ala-Gln-Ser-Arg-Leu-Thr-Ala-The-Ser-  
    M  A  Q  S  R  L  T  A  T  S  
11  Ala-Ser-Arg-Val-Gln-Ala-Ile-Leu-Leu-Ser-  
    A  S  R  V  Q  A  I  L  L  S  
21  Gln-Pro-Pro-Lys-Gln-Leu-Gly-Leu-Arg-Ala-  
    Q  P  P  K  Q  L  G  L  R  A  
31  Pro-Ala-Asn-Thr-Pro-Leu-Ile-Phe-Val-Phe-  
    P  A  N  T  P  L  I  F  V  F  
41  Ser-Leu-Glu-Ala-Gly-Phe-His-His-Ile-Cys-  
    S  L  E  A  G  F  H  H  I  C  
51  Gln-Ala-Gly-Leu-Lys-Leu-Leu-Thr-Ser-Gly-  
    Q  A  G  L  K  L  L  T  S  G  
61  Asp-Pro-Pro-Ala-Ser-Ala-Phe-Gln-Ser-Ala-  
    D  P  P  A  S  A  F  Q  S  A  
71  Gly-Ile-Thr-Gly-Val-Ser-His-Leu-Thr-Gln-  
    G  I  T  G  V  S  H  L  T  Q  
81  Pro-Ala-Asn-Leu-Asp-Lys-Lys-Ile-Cys-Ser-  
    P  A  N  L  D  K  K  I  C  S  
91  Asn-Gly-Gly-Ser-Cys-Tyr-Val-Ala-Gln-Ala-  
    N  G  G  S  C  Y  V  A  Q  A  
101 Gly-Leu-Lys-Leu-Leu-Ala-Ser-Cys-Asn-Pro-  
    G  L  K  L  L  A  S  C  N  P  
111 Ser-Lys  
    S  K
```

6/16

## FIG. 4

NTP, 106 amino acids

NCBI Entrez-Protein Accession #AAH14951 PID g15928971

```
1   Met-Trp-Thr-Leu-Lys-Ser-Ser-Leu-Val-Leu-  
    M   W   T   L   K   S   S   L   V   L  
11  Leu-Leu-Cys-Leu-Thr-Cys-Ser-Tyr-Ala-Phe-  
    L   L   C   L   T   C   S   Y   A   F  
21  Met-Phe-Ser-Ser-Leu-Arg-Gln-Lys-Thr-Ser-  
    M   F   S   S   L   R   Q   K   T   S  
31  Glu-Pro-Gln-Gly-Lys-Val-Pro-Cys-Gly-Glu-  
    E   P   Q   G   K   V   P   C   G   E  
41  His-Phe-Arg-Ile-Arg-Gln-Asn-Leu-Pro-Glu-  
    H   F   R   I   R   Q   N   L   P   E  
51  His-Thr-Gln-Gly-Trp-Leu-Gly-Ser-Lys-Trp-  
    H   T   Q   G   W   L   G   S   K   W  
61  Leu-Trp-Leu-Leu-Phe-Ala-Val-Val-Pro-Phe-  
    L   W   L   L   F   A   V   V   P   F  
71  Val-Ile-Leu-Lys-Cys-Gln-Arg-Asp-Ser-Glu-  
    V   I   L   K   C   Q   R   D   S   E  
81  Lys-Asn-Lys-Val-Arg-Met-Ala-Pro-Phe-Phe-  
    K   N   K   V   R   M   A   P   F   F  
91  Leu-His-His-Ile-Asp-Ser-Ile-Ser-Gly-Val-  
    L   H   H   I   D   S   I   S   G   V  
101 Ser-Gly-Lys-Arg-Met-Phe  
    S   G   K   R   M   F
```

7/16

## FIG. 5

NTP, 106 amino acids

NCBI Entrez-Protein Accession #XP\_039102, PID g18599339

```
1   Met-Phe-Phe-Val-Leu-Tyr-Arg-Phe-Cys-Phe-
    M   F   F   V   L   Y   R   F   C   F

11  Cys-Phe-Phe-Glu-Thr-Glu-Ser-His-Ser-Leu-
    C   F   F   E   T   E   S   H   S   L

21  Thr-Gln-Ala-Gly-Val-Gln-Trp-Cys-Glu-Leu-
    T   Q   A   G   V   Q   W   C   E   L

31  Gly-Ser-Pro-Gln-Pro-Leu-Pro-Ser-Gly-Phe-
    G   S   P   Q   P   L   P   S   G   F

41  Lys-Arg-Phe-Ser-Cys-Leu-Ser-Leu-Leu-Ser-
    K   R   F   S   C   L   S   L   L   S

51  Ser-Trp-Asp-Tyr-Ser-His-Glu-Pro-Pro-His-
    S   W   D   Y   S   H   E   P   P   H

61  Pro-Val-Ile-Cys-Ser-Phe-Leu-Met-Glu-Lys-
    P   V   I   C   S   F   L   M   E   K

71  Cys-Leu-Ile-Leu-Tyr-Lys-Pro-Asn-Gly-Asp-
    C   L   I   L   Y   K   P   N   G   D

81  Thr-Ile-Gly-Pro-Ile-Leu-Val-Gln-Gln-Gly-
    T   I   G   P   I   L   V   Q   Q   G

91  Lys-Arg-Gln-Lys-Leu-Tyr-Ile-Ser-Ala-Asp-
    K   R   Q   K   L   Y   I   S   A   D

100 Leu-Val-His-Leu-Ile-Ala
    L   V   H   L   I   A
```

8/16

## FIG. 6

NTP, 98 amino acids

(Sequence 30 from U.S. Patent Nos. 5,830,670, 5,948,634, and 5,948,888)

NCBI Entrez-Protein Accession # AAE25445, PID g10048538

```
1   Glu-Ala-Tyr-Tyr-Thr-Met-Leu-His-Leu-Pro-
    E   A   Y   Y   T   M   L   H   L   P

11  Thr-Thr-Asn-Arg-Pro-Lys-Ile-Ala-His-Cys
    T   T   N   R   P   K   I   A   H   C

21  Ile-Leu-Phe-Asn-Gln-Pro-His-Ser-Pro-Arg-
    I   L   F   N   Q   P   H   S   P   R

31  Ser-Asn-Ser-His-Ser-His-Pro-Asn-Pro-Leu-
    S   N   S   H   S   H   P   N   P   L

41  Lys-Leu-His-Arg-Arg-Ser-His-Ser-His-Asn-
    K   L   H   R   R   S   H   S   H   N

51  Arg-Pro-Arg-Ala-Tyr-Ile-Leu-Ile-Thr-Ile-
    R   P   R   A   Y   I   L   I   T   I

61  Leu-Pro-Ser-Lys-Leu-Lys-Leu-Arg-Thr-His-
    L   P   S   K   L   K   L   R   T   H

71  Ser-Gln-Ser-His-His-Asn-Pro-Leu-Ser-Arg-
    S   Q   S   H   H   N   P   L   S   R

81  Thr-Ser-Asn-Ser-Thr-Pro-Thr-Asn-Ser-Phe-
    T   S   N   S   T   P   T   N   S   F

91  Leu-Met-Thr-Ser-Ser-Lys-Pro-Arg
    L   M   T   S   S   K   P   R
```



9/16

## FIG. 7

NTP, 75 amino acids

(Sequence 48 from U.S. Patent Nos. 5,830,670, 5,948,634, and 5,948,888)

NCBI Entrez-Protein Accession #AAE25448, PID g10048541

```
1   Ser-Ser-Ser-Leu-Gly-Leu-Pro-Lys-Cys-Trp-  
    S  S  S  L  G  L  P  K  C  W  
11  Asp-Tyr-Arg-His-Glu-Leu-Leu-Ser-Leu-Ala-  
    D  Y  R  H  E  L  L  S  L  A  
21  Leu-Met-Ile-Asn-Phe-Arg-Val-Met-Ala-Cys  
    L  M  I  N  F  R  V  M  A  C  
31  Thr-Phe-Lys-Gln-His-Ile-Glu-Leu-Arg-Gln-  
    T  F  K  Q  H  I  E  L  R  Q  
41  Lys-Ile-Ser-Ile-Val-Pro-Arg-Lys-Leu-Cys-  
    K  I  S  I  V  P  R  K  L  C  
51  Cys-Met-Gly-Pro-Val-Cys-Pro-Val-Lys-Ile-  
    C  M  G  P  V  C  P  V  K  I  
61  Ala-Leu-Leu-Thr-Ile-Asn-Gly-His-Cys-Thr-  
    A  L  L  T  I  N  G  H  C  T  
71  Trp-Leu-Pro-Ala-Ser  
    W  L  P  A  S
```

## FIG. 8

NTP, 68 amino acids

(Sequence 36 from U.S. Patent Nos. 5,830,670, 5,948,634, and 5,948,888)

NCBI Entrez-Protein Accession #AAE25446, PID g10048539

1	Met-Phe-Val-Phe-Cys-Leu-Ile-Leu-Asn-Arg-
	M F V F C L I L N R
11	Glu-Lys-Ile-Lys-Gly-Gly-Asn-Ser-Ser-Phe-
	E K I K G G N S S F
21	Phe-Leu-Leu-Ser-Phe-Phe-Phe-Ser-Phe-Gln-
	F L L S F F F S F Q
31	Asn-Cys-Cys-Gln-Cys-Phe-Gln-Cys-Arg-Thr-
	N C C Q C F Q C R T
41	Thr-Glu-Gly-Tyr-Ala-Val-Glu-Cys-Phe-Tyr-
	T E G Y A V E C F Y
51	Cys-Leu-Val-Asp-Lys-Ala-Ala-Phe-Glu-Cys-
	C L V D K A A F E C
61	Trp-Trp-Phe-Tyr-Ser-Phe-Asp-Thr
	W W F Y S F D T

11/16

## FIG. 9

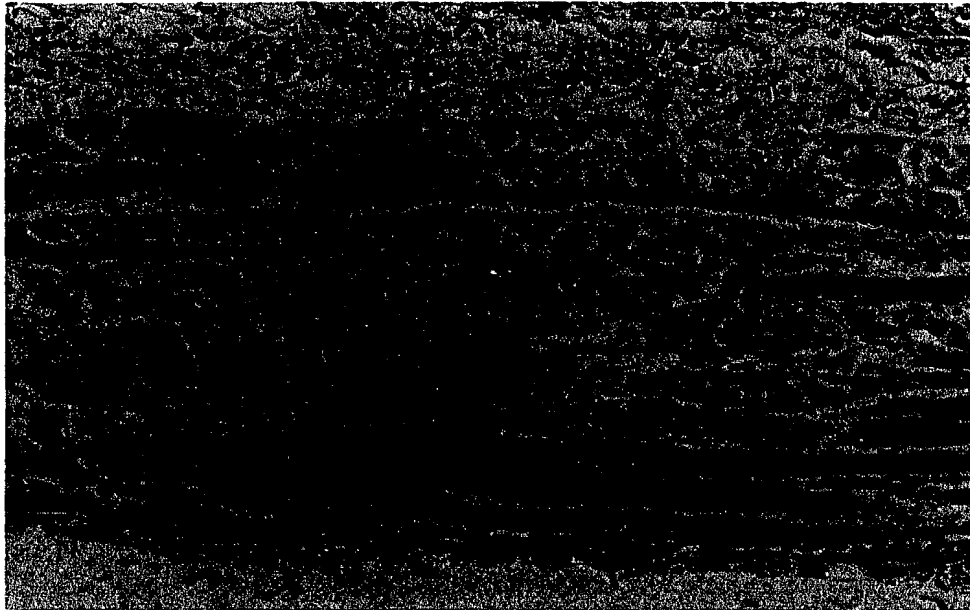
NTP, 61 amino acids

NCBI Entrez-Protein Accession #AAH02534, PID g12803421

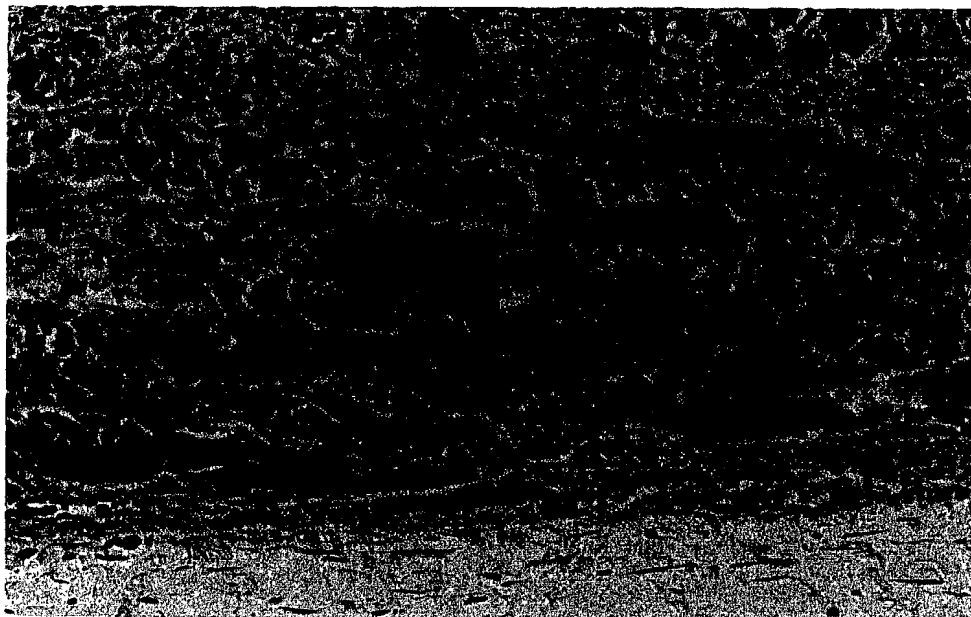
```
1   Met-Glu-Pro-His-Thr-Val-Ala-Gln-Ala-Gly-  
    M   E   P   H   T   V   A   Q   A   G  
11  Val-Pro-Gln-His-Asp-Leu-Gly-Ser-Leu-Gln-  
    V   P   Q   H   D   L   G   S   L   Q  
21  Ser-Leu-Leu-Pro-Arg-Phe-Lys-Arg-Phe-Ser-  
    S   L   L   P   R   F   K   R   F   S  
31  Cys-Leu-Ile-Leu-Pro-Lys-Ile-Trp-Asp-Tyr-  
    C   L   I   L   P   K   I   W   D   Y  
41  Arg-Asn-Met-Asn-Thr-Ala-Leu-Ile-Lys-Arg-  
    R   N   M   N   T   A   L   I   K   R  
51  Asn-Arg-Tyr-Thr-Pro-Glu-Thr-Gly-Arg-Lys-  
    N   R   Y   T   P   E   T   G   R   K  
61  Ser  
    S
```

12/16

**FIG. 10**

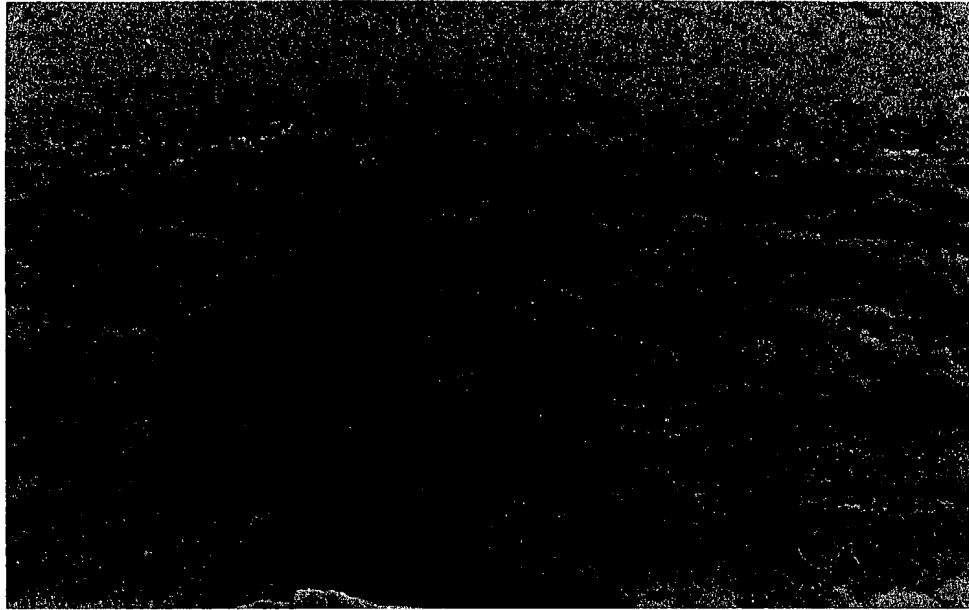


**FIG. 11**

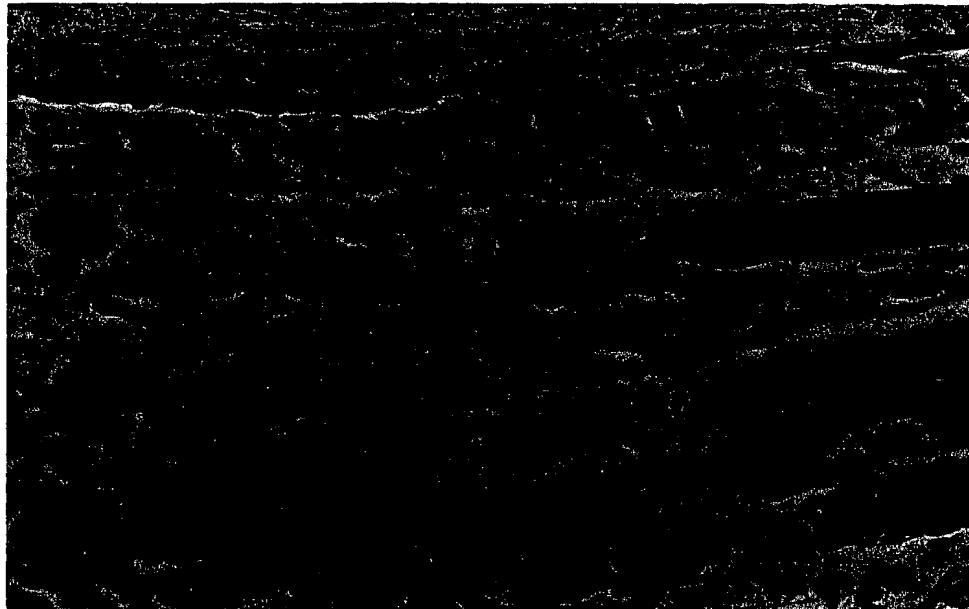


13/16

**FIG. 12**



**FIG. 13**



14/16

**FIG. 14**

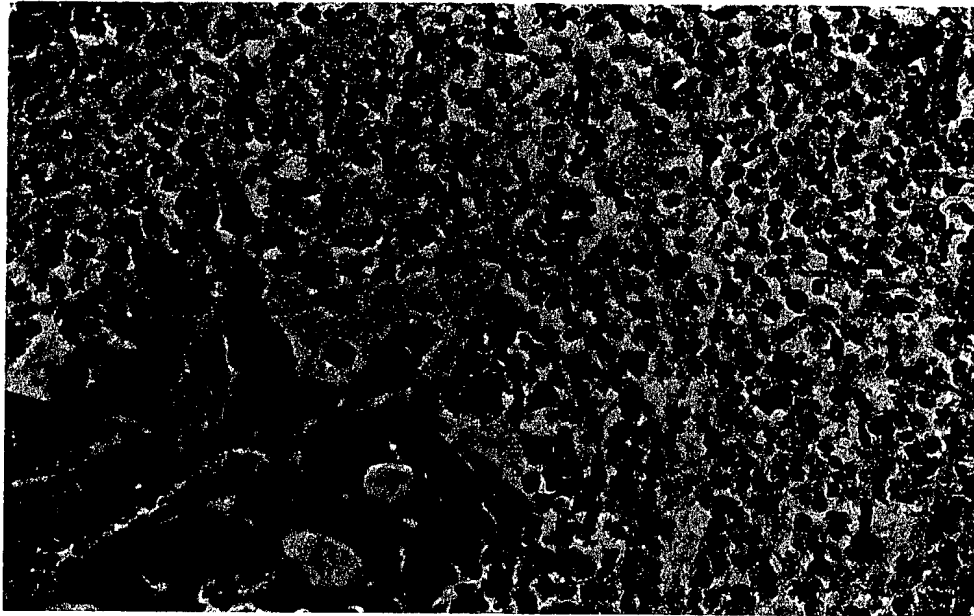


**FIG. 15**

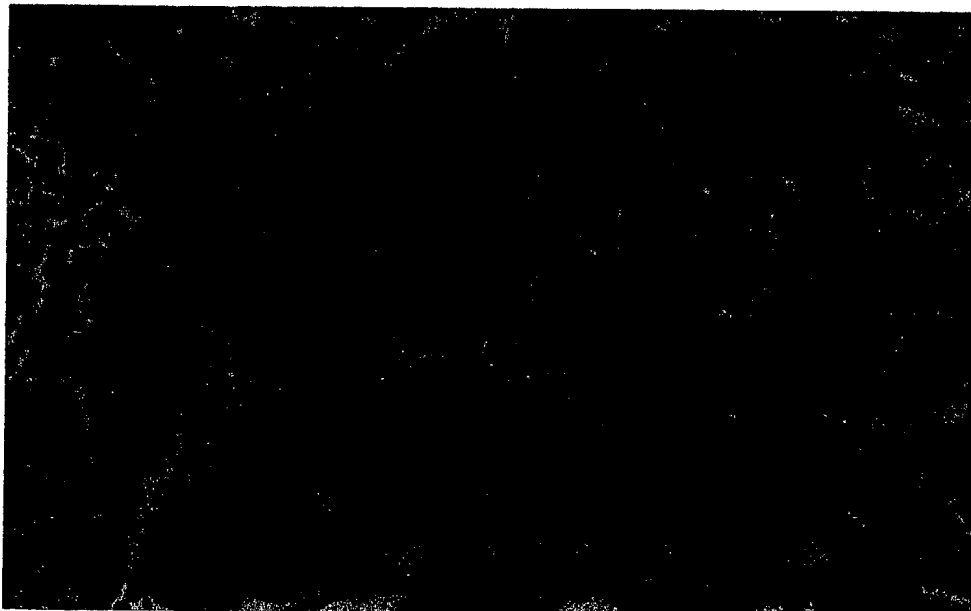


15/16

**FIG. 16**

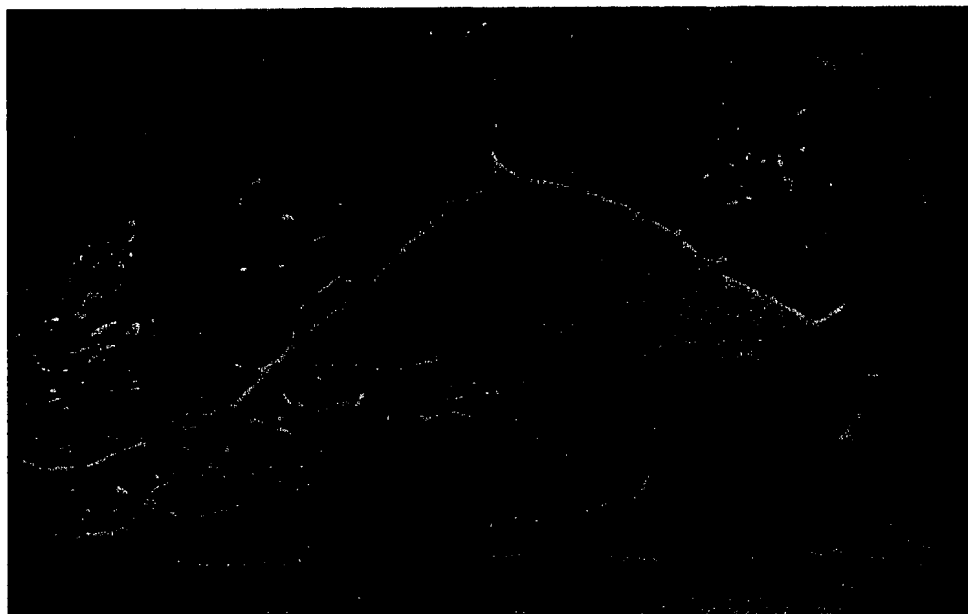


**FIG. 17**



16/16

**FIG. 18**



**FIG. 19**

